

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 December 2006 (21.12.2006)

PCT

(10) International Publication Number
WO 2006/135400 A3

(51) International Patent Classification:
C12Q 1/68 (2006.01)

(21) International Application Number:
PCT/US2005/030058

(22) International Filing Date: 24 August 2005 (24.08.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/604,329 24 August 2004 (24.08.2004) US

(71) Applicant (for all designated States except US): ISIS
PHARMACEUTICALS, INC. [US/US]; 1896 Ruther-
ford Road, Carlsbad, CA 92008 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SAMPATH, Ran-
garajan [US/US]; 12223 Mammix Road, San Diego, CA
92129 (US); HALL, Thomas, A. [US/US]; 5239 Wohlford
Street, Oceanside, CA 92056 (US); ECKER, David, J.
[US/US]; 1041 Saxony Road, Encinitas, CA 92024 (US);
HOFSTADLER, Steven, A. [US/US]; 1020 Park Hill
Place, Vista, CA 92081 (US).

(74) Agent: CASIMIR, David, A.; Medlen & Carroll, LLP,
101 Howard Street, Suite 350, San Francisco, CA 94105
(US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, NZ, NA, NG, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SI,
SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

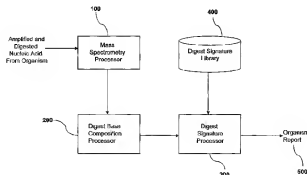
Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments
- with sequence listing part of description published sepa-
rately in electronic form and available upon request from
the International Bureau

(88) Date of publication of the International search report:
1 November 2007

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR RAPID IDENTIFICATION OF RECOMBINANT ORGANISMS



(57) Abstract: Rapid mass-spectrometry methods for characterization of recombinant or genetically engineered organisms are provided. The methods can be used for surveillance of biowarfare agents which may include recombinant or genetically engineered bacteria, viruses, fungi and protozoa

INTERNATIONAL SEARCH REPORT

International application No

PCT/US 05/30058

A. CLASSIFICATION OF SUBJECT MATTER USPC 435/6 IPC(8) - C12Q 1/68 (2007.01) According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) USPC 435/6 IPC(8) - C12Q 1/68 (2007.01)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC-435/4, 5 and 6 PUBWEST, GOOGLE		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PUBWEST(PGPB,USPT,USOC,EPAB,JPAB); mass spectroscopy, restriction, digest, nucleic acid, transform, recombinant, exogenous, transgenic		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 2002/0042112 A1 (KOSTER ET AL.) 11 Apr 2002 (11.04.2002) paragraphs [0037], [0038], [0044], [0093], [00197], [0024], [0025], [0315]	1-24
X	WO 9854571 A1 (FOOTE ET AL) 03 Dec 1998 (03.12.1998) pg 9, ln 4-7; pg 9, ln 29-30; pg 19, ln 11-17	25
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 16 April 2007 (16.04.2007)		Date of mailing of the international search report 20 AUG 2007
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No 571-273-3201		Authorized officer: Leo W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774